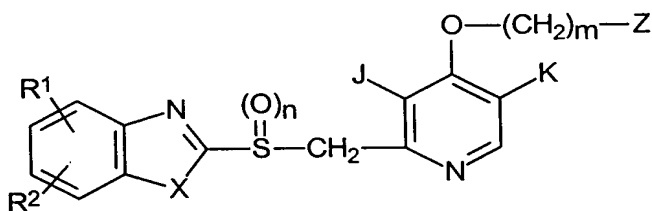


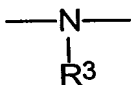
**IN THE CLAIMS:**

1. An aqueous pharmaceutical formulation suitable for intravenous injection comprising:  
an anti-ulcerative compound having the following formula:



wherein  $R^1$  and  $R^2$  are independently selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogenated lower alkyl, lower alkoxycarbonyl, a carboxyl group, and halogen;

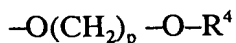
X is a member selected from the group consisting of  $-O-$ ,  $-S-$  or



where  $R^3$  is a member selected from the group consisting of hydrogen, lower alkyl, phenyl, benzyl, and lower alkoxycarbonyl; and

Z is selected from the group consisting of:

(1) a group of the formula:



where p is an integer of 1 to 3 and  $R^4$  is a hydrogen atom or a lower alkyl, aryl or aralkyl group;

(2) a group of the general formula:

1  $-\text{O}(\text{CH}_2)_q-\text{R}^5$

2 where q is an integer of 1 to 3 and  $\text{R}^5$  is a halogen atom or an alkoxy carbonyl, aryl or  
3 heteroaryl group;

4 (3) a group of the general formula:

5  $-\text{O}(\text{CH}_2)_r-\text{O}(\text{CH}_2)_s-\text{R}^6$

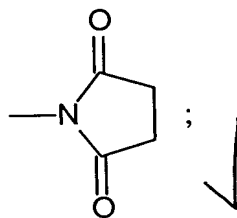
6 where r and s each independently are an integer of 1 to 5 and  $\text{R}^6$  is a hydrogen atom or a  
7 lower alkyl group;

8

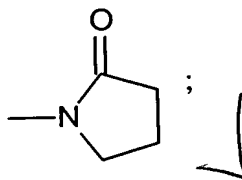
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(4) a group of the formula:



(5) a group of the formula:



15

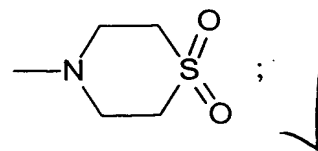
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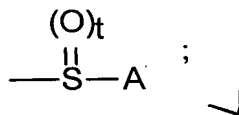
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1 (6) a group of the formula:

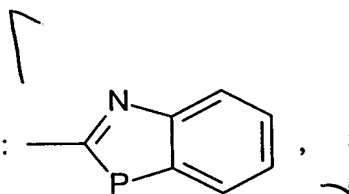


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4 (7) a group of the general formula:

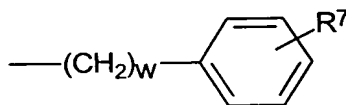


5  
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11 where t is an integer of 0 to 2 and A is a lower alkyl, alkoxycarbonylmethyl, pyridyl or  
12 furyl

13 group, or a group of the general formula:



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16 where P is selected from the group consisting of: -NH-, -O- or -S- or a group of the  
17 general formula:



19  
20  
21 wherein R<sup>7</sup> is hydrogen or lower alkyl and w is from 0 to 3;

1 (8) a group of the general formula:  $\text{---N}(\text{R}^8)(\text{CH}_2)\text{---}$  where  $\text{R}^8$  is an

2  
3 acetoxy or lower alkyl group; and

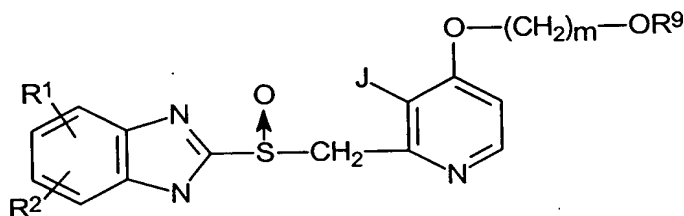
4 (9) a group of the general formula:  $\text{---OR}^9$

5 where  $\text{R}^9$  is a hydrogen atom or a lower alkyl or aryl group;

6 n is an integer of 0 to 2; m is an integer of 2 to 10, and

7 J and K are independently hydrogen or lower alkyl, with the proviso that  
8 when Z is a group falling under the above category (9),  $\text{R}^9$  is a lower alkyl group and m  
9 stands for an integer of 3 to 10, and pharmaceutically acceptable salts thereof; and  
10 glycine, in a pharmaceutically acceptable carrier.

2. An aqueous pharmaceutical formulation of claim 1 suitable for  
intravenous injection comprising:  
an anti-ulcerative compound having the following formula:



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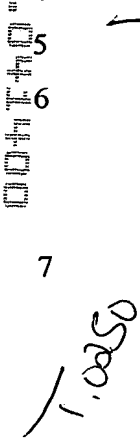
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## 3.1.2. The $\mathcal{H}_\infty$ norm

23



wherein  $R^4$  is selected from the group consisting of hydrogen, lower alkyl, aryl, and aralkyl;

wherein J is selected from the group consisting of hydrogen or lower alkyl;

wherein m is an integer from 2 to 10;

wherein p is an integer from 1 to 3;

and pharmaceutically acceptable salts thereof;

glycine, sodium hydroxide; and

a tonicity agent.

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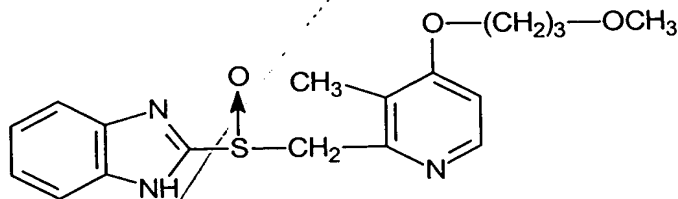
4. The aqueous pharmaceutical formulation suitable for intravenous injection of claim 1 wherein said tonicity agent is selected from the group consisting of sodium chloride, glycerin, mannitol, sucrose, lactose, and dextrose.

5. The aqueous pharmaceutical formulation suitable for intravenous injection of claim 2 wherein said tonicity agent is selected from the group consisting of sodium chloride and dextrose.

6. The aqueous pharmaceutical formulation suitable for intravenous injection of claim 3 wherein said tonicity agent is selected from the group consisting of sodium chloride and dextrose.

Sub  
C3

7. The aqueous pharmaceutical formulation suitable for intravenous injection of claim 1 wherein said compound is



26

1           8.    The aqueous pharmaceutical formulation suitable for intravenous  
2 injection of claim 7 wherein said tonicity agent is selected from the group consisting of  
3 sodium chloride and dextrose.

1           9.    The aqueous pharmaceutical formulation suitable for intravenous  
2 injection of claim 8 wherein said tonicity agent is sodium chloride and said sodium chloride  
3 is present in said formulation at a concentration of about 0.9% by weight.

1           10.   The aqueous pharmaceutical formulation suitable for intravenous  
2 injection of claim 8 wherein said tonicity agent is dextrose and said dextrose is present in said  
3 formulation at a concentration of about 5% by weight.

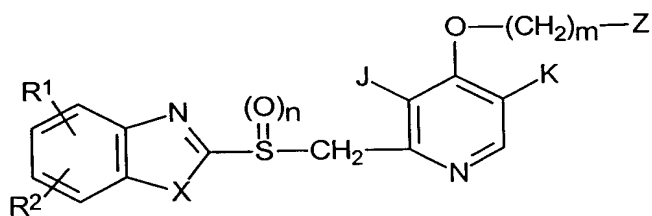
1           11.   The aqueous pharmaceutical formulation suitable for intravenous  
2 injection of claim 1 wherein said formulation has an alkaline pH, and wherein said glycine in  
3 said formulation is present at a concentration of between about 1 mM and 300 mM.

1           12.   The aqueous pharmaceutical formulation suitable for intravenous  
2 injection of claim 4 wherein said formulation has a pH of between about 9 and about 12, and  
3 wherein said glycine in said formulation is present at a concentration of between about 10  
4 mM and 300 mM.

1           13.   The aqueous pharmaceutical formulation suitable for intravenous  
2 injection of claim 8 wherein said formulation has a pH of between about 9 and 12, and  
3 wherein said glycine in said formulation is present at a concentration of between about 10  
4 mM and 300 mM.

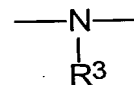
1           14.   A method for stabilizing anti-ulcerative formulations suitable for  
2 intravenous injection which comprises:  
3               providing a compound of the formula  
4

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wherein  $R^1$  and  $R^2$  are independently selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogenated lower alkyl, lower alkoxycarbonyl, a carboxyl group, and halogen;

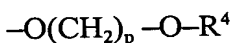
X is a member selected from the group consisting of  $-O-$ ,  $-S-$  or



where  $R^3$  is a member selected from the group consisting of hydrogen, lower alkyl, phenyl, benzyl, and lower alkoxycarbonyl; and

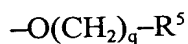
Z is selected from the group consisting of:

(1) a group of the formula:



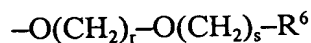
where  $p$  is an integer of 1 to 3 and  $R^4$  is a hydrogen atom or a lower alkyl, aryl or aralkyl group;

(2) a group of the general formula:



where  $q$  is an integer of 1 to 3 and  $R^5$  is a halogen atom or an alkoxycarbonyl, aryl or heteroaryl group;

(3) a group of the general formula:



where  $r$  and  $s$  each independently are an integer of 1 to 5 and  $R^6$  is a hydrogen atom or a

28



1 lower alkyl group;

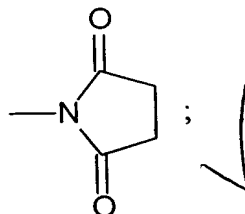
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(4) a group of the formula:



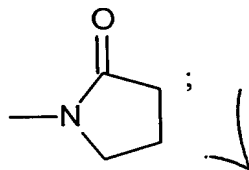
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(5) a group of the formula:



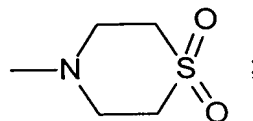
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(6) a group of the formula:

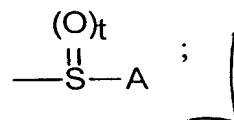


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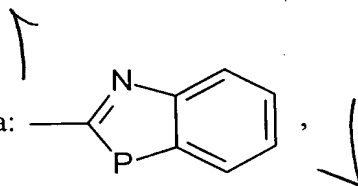
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1 (7) a group of the general formula:

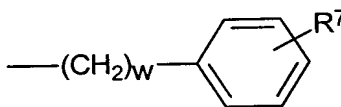


2  
3 where t is an integer of 0 to 2 and A is a lower alkyl, alkoxy carbonylmethyl, pyridyl or furyl

4  
5 group, or a group of the general formula:

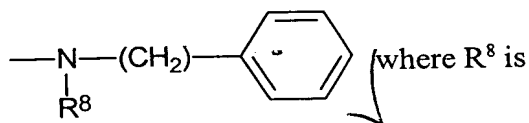


6  
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10 where P is selected from the group consisting of: -NH-, -O- or -S- or a group of the  
general formula:



11  
12 wherein R<sup>7</sup> is hydrogen or lower alkyl and w is from 0 to 3;

13  
14 (8) a group of the general formula:



15 an

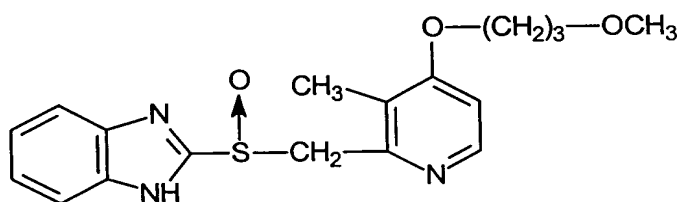
16  
17 acetoxy or lower alkyl group; and

(9) a group of the general formula:  $-OR^9$   
 where  $R^9$  is a hydrogen atom or a lower alkyl or aryl group;  
 $n$  is an integer of 0 to 2;  $m$  is an integer of 2 to 10, and  
 $J$  and  $K$  are independently hydrogen or lower alkyl, with the proviso that when  
 $Z$  is a group falling under the above category (9),  $R^9$  is a lower alkyl group and  $m$  stands for  
 an integer of 3 to 10, and pharmaceutically acceptable salts thereof;  
 providing a solution suitable for intravenous injection which has a pH of  
 between about 10 and 11 and which comprises glycine; and  
 admixing said compound and said solution until said compound is dissolved in  
 said solution.

15. The method of claim 14 wherein said solution contains a solute  
 selected from the group consisting of dextrose and sodium chloride.

16. The method of claim 14 wherein said glycine is present in said solution  
 at a concentration of between about 10 and about 300 mM.

17. The method of claim 14 wherein said compound is



18. The method of claim 17 wherein said solution contains a solute

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1 selected from the group consisting of dextrose and sodium chloride.

1 19. The method of claim 18 wherein said glycine is present in said solution  
2 at a concentration of between about 10 and about 300 mM.

1 20. The method of claim 19 wherein said solution contains a solute  
2 selected from the group consisting of dextrose and sodium chloride, and wherein said  
3 solution is isotonic with blood plasma.

1 21. The formulation of claim 1, which comprises a tonicity agent.

22. The formulation of claim 1, which comprises sodium hydroxide.

23. The method of claim 11, wherein said alkaline pH is between about 9  
and about 12.

Sub  
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